

Noemacheilus baenzigeri n. sp.,
a new noemacheiline loach from
Northern Thailand
(Osteichthyes: Cypriniformes: Cobitididae)

by

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With 7 figures

ABSTRACT

Noemacheilus baenzigeri n. sp. is described from the Mae Nam Ping drainage in Northern Thailand; it is characterized by large scales and by the position of anus, situated immediately after insertion of pelvic fins. It has the same colour pattern as juveniles of *N. spilotos* Fowler, 1934 which occurs sympatrically.

While examining noemacheiline loaches I collected in 1980 in Northern Thailand, I came across a series of six small specimens which I tentatively determined in the field as juveniles of *Noemacheilus spilotos* Fowler, 1934. A closer examination later revealed that three really belonged to that species, the other three representing a new species with the same colour pattern. The main diagnostic characters of the new species (anus position, scale size) allow me to think that it possibly also represents a new genus. I already explained (KOTTELAT, 1982) my reasons for not naming new genera of noemacheilines in the actual state of our knowledges. Thus, the new species is described as belonging to *Noemacheilus*. Its generic status will be determined later when relationships within the subfamily are better understood.

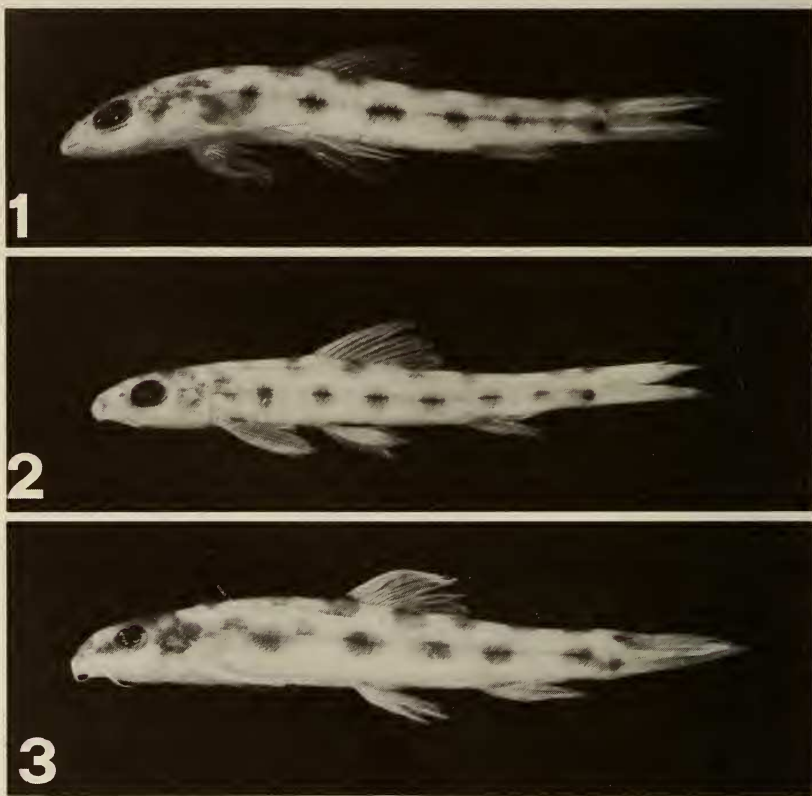
Noemacheilus baenzigeri n. sp.

HOLOTYPE (fig. 1): MHNG (Muséum d'Histoire naturelle, Genève) 2081.32, 25.6 mm SL; Thailand: Chiangmai Prov.: Mae Nam Taeng at Mae Taeng (19° 07' N, 98° 56' E); Kottelat, 14 IV 1980.

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PARATYPES: MHNG 2081.33 (fig. 2), 23.9 mm SL; same data. — CMK (author's collection) 3173, 23.9 mm SL; same data.

Diagnosis: A new noemacheiline loach differentiated from any other by the position of anus opening situated closely behind insertion of pelvic fins.



FIGS. 1-3.

1. *Noemacheilus baenzigeri* sp. n., holotype, MHNG 2081.32.
2. *Noemacheilus baenzigeri* sp. n., paratype, MHNG 2081.33.
3. *Noemacheilus spilotos* Fowler, 1934, MHNG 2081.34, 25.4 mm s.l., Mae Taeng.

Description: The morphometric and meristic data are given on table 1. The body is compressed and the belly flat. The pectoral fins reach the basis of pelvic fins which do not reach anal fin. The anus lays immediately after pelvic girdle. There is no axillary lobe at base of pelvic fin. The first pelvic ray is inserted under third or fourth simple dorsal ray and the anus is under third or fourth branched dorsal ray.

The eyes are somewhat elliptical and they are visible from underside of animal. The anterior nostril is modified in a short tube (fig. 5); the posterior one is widely open.

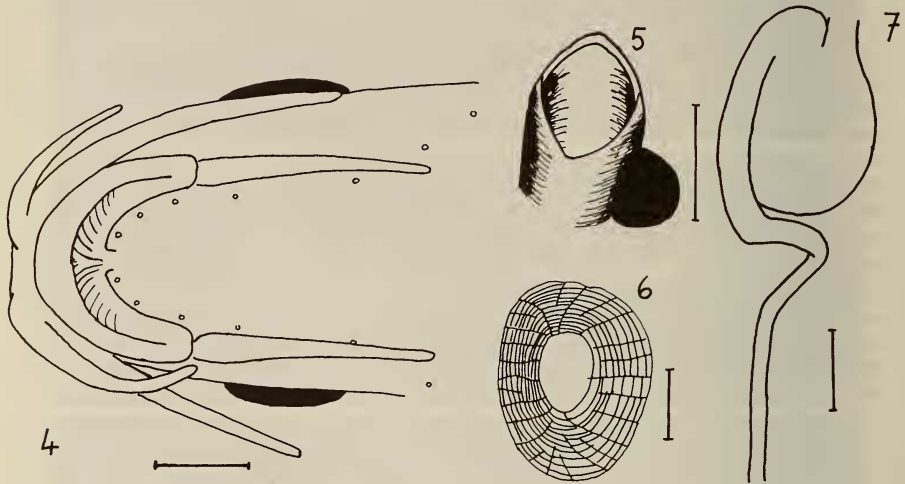
TABLE 1. Morphometric and meristic characters of *Noemacheilus baenzigeri* sp. n.

Standard length	MHNG		MHNG		CMK 3173	
	25.6 mm		23.9 mm		23.9 mm	
	% s.l.	% h.l.	% s.l.	% h.l.	% s.l.	% h.l.
Total length	125.8		127.2		126.4	
Dorsal length of head	21.9		21.8		22.2	
Lateral length of head	23.4	107.1	23.9	109.6	23.9	107.6
Predorsal length	47.3		47.3		46.0	
Prepelvic length	46.1		46.0		45.8	
Pre-anus length	50.4		49.8		51.9	
Preal length	76.2		76.6		75.7	
Head depth (at nape)	12.1	55.4	13.0	59.6	12.6	56.6
Body depth	14.8	67.9	15.1	69.2	13.8	62.3
Depth of caudal peduncle	8.2	37.5	8.4	38.5	8.0	35.9
Length of caudal peduncle	16.4	75.0	17.2	78.9	16.3	73.6
Snout length	8.6	39.3	8.8	40.4	8.8	39.6
Head width (at nares)	10.2	46.4	10.0	46.2	9.6	43.4
Maximum width of head	13.3	60.7	13.8	63.5	13.0	58.5
Body width (in front of dorsal fin)	11.3	51.8	10.9	50.0	10.0	45.3
Body width (in front of anal fin)	7.4	33.9	7.5	34.6	6.7	30.2
Eye diameter	7.0	32.1	7.1	32.7	7.1	32.1
Interorbital width	6.3	28.6	5.9	26.9	6.7	30.2
Length of maxillary barbels	3.5	16.1	5.4	25.0	4.2	18.9
Length of inner rostral barbel	5.1	23.2	5.9	26.9	5.0	22.6
Length of outer rostral barbel	9.0	41.1	10.5	48.1	8.8	39.6
Height of dorsal fin	19.1	87.5	22.6	103.9	20.5	92.5
Length of upper caudal lobe	25.4	116.1	25.9	119.2	26.4	118.9
Length of lower caudal lobe	26.2	119.6	28.0	128.9	25.1	113.2
Length of median caudal rays	18.8	85.7	21.3	98.1	18.8	84.9
Length of anal fin	16.4	75.0	18.4	84.6	16.7	75.5
Length of pelvic fins	18.0	82.1	18.8	86.5	17.6	79.3
Length of pectoral fins	26.7	121.4	26.4	121.2	25.1	113.2
D	4/10		4/10		4/10	
C	9/17/8		9/17/6		8/17/6	
A	3/5		3/5		3/5	
V	8		8		8	
P	13		12		13	
Perforations on lateral line	63		61		63	
Caudal peduncle: length/height	2.00		2.05		2.05	

The mouth is arched, the lips are thin and finely pleated; the processus dentiformis is present (fig. 4). The maxillary and outer rostral barbels reach under middle of eye; the inner rostral ones reach somewhat beyond corner of mouth.

There is no suborbital flaplet. Small tubercles are present on barbels, snout, cheeks and top of head. They are particularly distinct around eyes.

The scales are elliptical. The focal zone is excentric and its diameter is less than half of scale diameter (fig. 6). They cover the whole body and belly and are not embedded.



FIGS. 4-7.

Noemacheilus baenzigeri sp. n.

4. Ventral view of head of holotype. 5. Left nares of CMK 3173.
6. Scale of CMK 3173. 7. Digestive duct of CMK 3173.
Scale: Figs. 4, 7: 1 mm; Fig. 5: 0.5 mm; Fig. 6: 0.2 mm.

The digestive duct is straight, with a short curve forming an incomplete loop under stomachic dilatation (fig. 7).

The lateral line is complete, perforating 61-63 scales.

Colour pattern: Body yellowish with six or seven large brown spots on the course of lateral line and six to eight brown saddles on mid-dorsal line. A blackish-brown spot at upper part of caudal fin base, at the extremity of lateral line. Upper part of head brown, under part yellowish. Fins hyalin.

Ecology: At the place and time of collection, the Mae Nam Taeng was a quite slow river flowing over sandy bottom. Nowhere was it deeper than 30 cm. There were indications that the water level would rise of at least 1.5 m during the rainy season. The specimens were collected under a bridge in Mae Taeng. This is evidently a secondary habitat. The primary habitat is not known. Other species occurring together with *N. baenzigeri* are: *N. binotatus* Smith, 1933, *N. spilotos* Fowler, 1934, *Acanthopsoides gracilis*

Fowler, 1934 and *Homaloptera sexmaculata* Fowler, 1934, all light coloured species (*H. sexmaculata* wears some large black markings on the back), reflecting a possible common adaptation to light sandy bottom biotopes. In a nearby marsh related with Mae Nam Taeng at high waters, I collected *Channa striata* (Bloch, 1797) and observed *Dermogenys pusillus* van Hasselt, 1823.

The sympatric occurrence of *N. baenzigeri* (figg. 1-2) and *N. spilotos* (fig. 3) is of particular interest as they possess very similar colour patterns. They differ in the presence of fewer spots (four) and saddles (five) in *N. spilotos* (this is the juvenile colour pattern; the adult one consist of irregular vertical stripes, as in most indochinese noemacheilines; I failed to collect adult specimens at this locality). All the other species were also represented by small specimens (possibly less than one year old).

Etymology: The new species is named for Dr. H. Bänziger, a swiss entomologist in Chiangmai without whose help my collecting trip would not have been so successful.

Relationships: The new species is unique among Indonesian, Indochinese, South Chinese and Indian noemacheilines by the position of anus just behind pelvic girdle, its very low number of scales along lateral line and the presence of tubercles around eyes. The colour pattern possibly is a retention of a juvenile character of an ancestral form. Related colour patterns are met in *N. spilotos* (see above) and *N. corica* from India, Nepal and Pakistan; but most juvenile colour patterns of noemacheilines are still unknown or can not be referred to adult patterns of already known species.

ACKNOWLEDGMENTS

The National Research Council of Thailand granted authorization to collect in Thailand. The Faculty of Fisheries, Kasetsart University, Bangkok, and particularly Dr. Prachit Wongrat, proved very helpful during my stay in their country. Dr. H. Bänziger, Chiangmai, was of great help in Northern Thailand.

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